



Iskratel Lumia C16

Compact, energy-saving Combo OLT
for XGS-PON, GPON and 10GE P2P

Key features

- Super compact 16-port Combo OLT
- Record-low power consumption
- Operating temperature from -40°C to $+65^{\circ}\text{C}$
- Dual nature: no hardware upgrade to virtualise
- AC or DC power supply
- Made in the EU

Iskratel Lumia family of OLTs is a product pillar of Iskratel, a specialised telco brand of Kontron. Iskratel unites eight decades of expertise with Kontron's reach and strength.

Iskratel Lumia C16 is a compact Combo OLT for XGS-PON, GPON and 10GE P2P fibre access that allows operators full flexibility to connect residential and business users via PON or P2P fibre access. While featuring **record-low energy consumption** and industry-leading temperature range, the world's first dual-nature Combo OLT facilitates a **cost-effective virtualisation** of the central-office infrastructure.

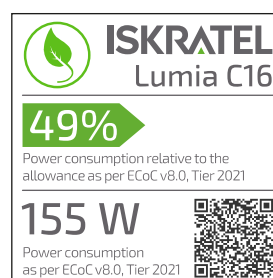
Lumia C16 is a compact OLT optimised for smaller fibre-access deployments. Its **16 Combo ports** serve up to 4,096 users and deliver performance for residential and business users alike.

The **record-low energy consumption** of Lumia C16 helps operators **cut energy bills**, implement sustainability strategies and reduce the impact on the environment.

The 1U OLT **excels in compactness** and saves rack space with ETSI-compliant 235 mm depth. Its size and **industry-leading temperature range** make it fit into street cabinets perfectly.

Lumia C16 is a unique OLT that lets operators virtualise the network at their own pace. Its **dual-nature** allows it to operate either as a conventional OLT or as a **disaggregated pOLT** with vOLT software running in the cloud.

Only software configuration gives this single box two very distinct characters. Thanks to its programmable hardware, **zero hardware upgrade** is required to virtualise the central office. This allows operators to **avoid an entire investment cycle** when transforming to software-defined access.



Next-generation
fibre access



Conventional or
virtualised operation



Prolonged lifecycle and
lowest five-year TCO

Iskratel Lumia C16: Technical characteristics

Network (uplink) interfaces	
25/10GE Ethernet	4× 25GE SFP28 /10GE SFP+
OLT interfaces (PON and P2P)	
PON/P2P interfaces	16 Combo ports: XGS-PON, GPON, 10GE P2P
XGS-PON characteristics	XGS-PON G.9807, split ratio max 1:256, 8k GEM port IDs
GPON characteristics	GPON G.984.x, OMCI G.988, split ratio max 1:128, 4k GEM port IDs, TR-247 interop
10GE P2P characteristics	10GBase-LR optical
Common characteristics	TR-101, TR-156, 16k T-CONT; XGS-PON and GPON only: G.988 OMCI, AES, FEC, DBA
Forwarding and performance	
Switching capacity	150 Gbps, 32k MAC entries, learning rate 5,000 MAC/s
Packet sizes	GPON 1,600 bytes, XGS-PON: 9 kB, 10GE P2P: 9 kB
VLAN	4,094 VLANs, Port-based/Native VLAN, Remarking, Provider-edge bridging
Topology management	Static LAG, LACP, ERPS, RSTP, MSTP
Frequency, phase sync	SyncE, Stratum3E, PTP
Service models	
VLAN service models	1:1 and N:1 (TR-156), 8k VLAN remarking rules
IP multicast	2k groups, IGMP v2/v3 snooping/filtering/proxy/forking/fast-leave, CAC, ACL, MVR
Quality of service	H-QoS, L2-L4 classification, marking, policing, queuing, scheduling, shaping, CAC
Traffic management	8k queues, Dynamic management and allocation
Software-defined networking	Flow awareness L1-L4, Per-flow policing and shaping, Profile-based management
Virtualisation and flow provisioning	
Compatibility and compliance	R-CORD™ 6.0, vOLTHA, ONOS, 64k concurrent flows
Management interfaces	Standard OpenOLT NBI, REST/YANG; CLI
Security	
User-port isolation	Protected port, Private port
Filtering and DoS prevention	Wire-speed L2-L4 IPv4/6 ACL, Telnet/SSH, App rate limiting, Overload protection
Storm control	Per ONT packet-rate control for bcst/mcast/unicast DLF traffic
MAC spoofing and flooding	Port security, Port security per VLAN, MAC source guard, MAC forced forwarding
Port-based security	DHCP snooping, IP source guard, Dynamic ARP inspection
Unauthorised DHCP server	DHCP filtering, DHCP options 60/43 (ACS)
User-line traceability	PPPoEIA, DHCP RA with option 82, DHCPv6 RA with interface ID
Management and monitoring	
Local management	RS232 (RJ-45)
Management interfaces	CLI console/telnet/SSH, SNMP, Web/RESTCONF, DHCP or static IP assignment
Management protocols	SNMPv2c/v3, ACS, Radius, TACACS+, Telnet/SSH, SNTp
Firmware upgrade	FTP, ACS, Dual image
Monitoring	Performance and quality, RMON, System resources, Mirroring, OLT port counters, OLT/ONT alarms, traffic counters (per VLAN, ONT, protocol, traffic type)
Mechanical and environmental	
Physical dimensions	H 45 mm (1U) × W 447 mm × D 235 mm, ETSI or 19" rack
Safety	EN 62368-1:2014 + A11:2017; UL 62368-1; CSA C22.2 No. 62368-1:2014, 2nd edition
EMC	EN 55032:2015 + A11:2020, EN 55035:2017 + A11:2020, EN 61000-3-2:2019 and EN 61000-3-3:2013 + A1:2019; FCC: 47 CFR Part 15, Subpart B (Clauses 15.107, 15.109) in conj. with ANSI C63.4:2014; ICES-003, Issue 7 in conj. with ANSI C63.4:2014
Storage conditions	ETS 300 019-1-1, class 1.2, temperature –50..+70 °C, RH 10..100%
Transport conditions	ETS 300 019-1-2, class 2.3
Operating conditions	ETS 300 019-1-3, class 3.1E, temperature –40..+65 °C, RH 5..90% non-condensing. Please refer to user manual for details. ⁽¹⁾
Power supply	
Supply voltage	DC power supply: dual/redundant, –42..–60 V; AC power supply: 100..240 V, 50..60 Hz
Power consumption (with 16 SFPs)	155 W typ., CoC compliant, Tier 2021, 49% consumption

⁽¹⁾ Product versions with dust protection may have different operating-temperature ranges. Please enquire for details.

Ordering code	Description
SBB3031EB	Iskratel Lumia C16 (XGS-PON/GPON/10GE P2P), 16 OLT ports, without power-supply unit
SBB3031MB	DC power-supply unit for Iskratel Lumia compact OLTs
SBB3031MC	AC power-supply unit for Iskratel Lumia compact OLTs